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ABSTRACT

The Even Start program was authorized by Congress in 1988 to provide early childhood, adult, and parenting education to participating families in a family literacy initiative. This document provides an executive summary of the National Evaluation of Even Start, which assessed services, participants and effectiveness. The summary highlights topics such as the program's organization, implementation, and effects. Among the findings summarized are the following: (1) in its first 4 years, the program served more than 20,000 families, most of whom had incomes under $10,000 per year and were headed by parents who did not complete high school; (2) the cost was about $2,500 per family per year; and (3) the program produced effects such as helping parents attain GEDs and improving their literacy skills, and helping children increase their school readiness and vocabulary. The summary concludes by noting lessons learned from the program, specifically the importance of a high level of program participation for parents and children and the importance of parent interest as a way to improve children's gains. (JW)

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NATIONAL EVALUATION OF THE EVEN START FAMILY LITERACY PROGRAM

FINAL REPORT

Executive Summary

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National Evaluation of the Even Start Family Literacy Program: Final Report

Executive Summary

Highlights

Authorized by Congress in 1988, the Even Start Family Literacy Program is designed to improve the educational opportunities of the nation's children and adults by providing three core services to participating families: early childhood education, adult education, and parenting education. Federal Even Start funds are used for coordinating existing services as well as for the direct provision of services which are not locally available.

Implementation of Even Start

- During its first four years Even Start provided for the implementation of several hundred projects which delivered family literacy services to more than 20,000 families at a Federal cost of about $2,500 per family per year. [see Chapter 4, p.41 and Chapter 12, p.231-236]

- Even Start served its intended population. Of all Even Start adults served, 79 percent did not complete high school, and 66 percent of Even Start families had total annual income under $10,000. The average adult entered Even Start with the literacy skills of a high school student, while the average three- or four-year-old child who entered Even Start scored at the 9th percentile on a nationally-normed vocabulary test. [see Chapter 4, p.39-70]

- The average Even Start family participated in the program for seven months and received an average of 13.5 hours of adult education, 6.5 hours of parenting education, and 26 hours of early childhood education each month. [see Chapter 6, p.137-145]

- Virtually all Even Start projects offered the three required core instructional services of adult education, parenting education, and early childhood education. They also offered some instructional services in a home-based setting, some services to parents and children together, and appropriate support services to enable families to participate fully in Even Start's core services. [see Chapter 5, p.72-81]

Effect of Even Start on Program Participation

- Adults and children in Even Start families participated much more frequently in educational services than they would have had they not been in the program: 91 percent of Even Start families participated in adult education vs. an estimated 30-40 percent without the program, 95 percent participated in parenting education vs. an estimated 8 percent without Even Start, and 98 percent participated in early childhood education vs. an estimated 60 percent in the absence of Even Start. [see Chapter 6, p.127-131]

Effect of Even Start on Parents

- Even Start helped many adults attain a GED. Across all 120 projects in the evaluation, 8 percent of adults who entered Even Start without a GED or diploma achieved one. In a randomized experimental study of a subset of 5 Even Start projects, significantly more adults in Even Start than in the control group attained a GED (22 percent vs. 6 percent). [see Chapter 9, p.192-198]

- Adults who participated in Even Start achieved significant positive gains (about 4-5 points, or 1/3 of a standard deviation) on the CASAS reading survey (a measure of adult functional literacy in reading), gains which are comparable or greater in size than those observed in other studies of adult education programs. However, families in a control group achieved similar gains. [see Chapter 9, p.183-192]

- Even Start did not produce any measurable effects on parenting skills as assessed by self-report measures of the home learning environment, parenting activities, parental expectations, sense of mastery, and depression; and in-home observations of parents reading to their children. This could be due to a weakness in our ability to measure these areas, to generally positive parent responses and high self-ratings at pretest, or to a lack of program effectiveness. [see Chapter 10, p.202-218]

- Even Start did not produce any measurable effect on family resources, income, or employment. It is unlikely that effects in these areas would be evident in the relatively short time period covered by this study. [see Chapter 11, p.219-230]

Effect of Even Start on Children

- Even Start children made learning gains, both in terms of school readiness skills and on a vocabulary test.

- By participating in Even Start, children learned school readiness skills such as colors, shapes, and sizes (as measured by the PreSchool Inventory) significantly faster than would be expected on the basis of normal development. Further, after one year of participation, Even Start children had significantly higher scores on the PSI than children in the control group. However, control group children caught up once they entered preschool or kindergarten. [see Chapter 8, p.157-165]

- When they entered the program Even Start children scored quite low, at the 9th percentile nationally, on the Peabody Picture Vocabulary Test (a test of receptive language). During their participation in Even Start, children gained a significant amount on the PPVT (so that they scored at the 19th percentile nationally). However, children in a control group gained a similar amount. [see Chapter 8, p.165-173]

Relationship Between Amount of Service and Outcomes

- A high level of exposure to program services is important. Adults and children with high levels of participation in Even Start's core services gained significantly more on tests than adults and children with low levels of participation. [see Chapter 8, p.180-181 and Chapter 9, p.189-192]

- The extent to which parents took part in parenting education is significantly related to gains in children's vocabulary (as measured by the PPVT), over and above gains in vocabulary that result from children participating in early childhood programs. Families that participated in a relatively low-intensity or moderate-intensity program had children who scored at the 17th to 19th percentile, while families that participated in a relatively high-intensity program had children who scored at the 26th percentile [see Chapter 8, p. 175-180].

To sum up, Even Start has had some positive short-term effects on children and adults, although those effects vary greatly across projects. In fact, there is great project-to-project variation in all facets of Even Start--program planning and implementation, characteristics of families served, participation, and outcomes. Even Start's services did result in gains for children and their parents, but on average, the gains are not greater than those that similarly motivated families would obtain for themselves using locally available services. In order for Even Start to have a larger effect, it must provide services more intensively.

Even Start families that were intensively engaged in core services did better than families with lower levels of participation. Further, there are indications that providing parenting education to parents has positive effects on their childrens' vocabularies. This type of

parent-to-child effect is encouraging in that it is exactly what Even Start hopes to produce. While other early childhood programs have demonstrated positive short-term effects on children, and some adult education programs have demonstrated positive effects on adults, Even Start is one of the few programs that has focused on parent literacy, parenting skills, and child development all at the same time.

In the long run, it is hoped that Even Start's effects on children will be enhanced because of the positive changes made in their parents. Follow-up studies of Even Start participants could be conducted to determine whether this long-term portion of Even Start's theory holds--that positive effects on parents will lead to long-term positive effects for children's cognitive development, social-emotional development, and behaviors.

The remainder of this executive summary expands upon these highlights. A full evaluation report is available from the U.S. Department of Education, Planning and Evaluation Service, or from Abt Associates Inc. of Cambridge, Massachusetts.

Background

The nation's literacy problems have traditionally been addressed through a dual system of public and private sector efforts: (1) remediation programs for adults in the form of adult education or workplace literacy programs, and (2) prevention programs for children through early childhood education efforts such as Head Start. The seeds of a new approach were sown in the late 1970s and early 1980s when many of the first "family literacy" programs were planned and implemented. Drawing on the experiences of existing early intervention and adult literacy programs, family literacy programs are based on the beliefs that children's early learning is greatly influenced by their parents, that parents must develop and value their own literacy skills in order to support their children's educational success, and that parents are their children's first and best teachers.

In the middle and late 1980s this approach emerged in full force as family literacy programs proliferated under a wide range of sponsors including state governments (e.g., Kentucky's PACE program), school districts (e.g., the Marin, California, Library Family Literacy Program), private foundations (e.g., the Kenan Charitable Trust's Family Literacy Program), private corporations (e.g., Stride Rite's Intergenerational Day Care Program), and universities (e.g., El Paso State College's Family Literacy Intergenerational English Literacy Program). The movement attained national status in 1989 when the federal government instituted its family literacy centerpiece, the Even Start program.

The Even Start Family Literacy Program

The Even Start Family Literacy Program was authorized by the Elementary and Secondary Education Act of 1965 as amended by the Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988, Part B of Chapter 1 of Title I (P.L. 100-297). In 1991, Congress passed the National Literacy Act (P.L. 102-73) which amended the Even Start program. According to the law, the Even Start program is intended to:

> ...improve the educational opportunities of the Nation's children and adults by integrating early childhood education and adult education for parents into a unified program....The program shall be implemented through cooperative projects that build on existing community resources to create a new range of services. (P.L. 100-297, Sec. 1051).

To participate in Even Start, a family must include an adult who is eligible for adult education programs under the Adult Education Act and who is a parent of a child less than eight years of age who lives in a Chapter 1 elementary school attendance area. Even Start projects must provide participating families with an integrated program of early childhood education, adult literacy or basic skills training, and parenting education. The program's design is based on the notion that these components build on each other and that families need to receive all three services, not just one or two, in order to effect lasting change and improve children's school success.

The U.S. Department of Education began administering Even Start in fiscal year 1989 as a demonstration program which provided school districts with discretionary grants for family literacy projects, generally for four years. In 1992, the program became administered by the states which hold grant competitions and make subgrant awards of a minimum of $75,000 per project annually. Exhibit 1 summarizes Even Start's funding history.

Exhibit 1

Even Start Funding History

Fiscal Year	Federal Funding	Number of Projects
1989	$14,820,000	76
1990	$24,201,000	123
1991	$49,770,000	234
1992	$70,000,000	340
1993	$89,123,000	440
1994	$91,373,000	474

Exhibit reads: In fiscal year 1991, $49.8 million of federal funding was used to provide Even Start grants to 234 local projects.
Source: U.S. Department of Education, Office of Policy and Planning.

Evaluation Design

The Even Start legislation required an independent national evaluation. In January 1990, the Office of Policy and Planning in the U.S. Department of Education (ED) awarded a contract for that evaluation to Abt Associates Inc., with a subcontract to RMC Research Corporation.

The effectiveness of Even Start was assessed by analyzing data from an experimental study (the In-Depth Study) conducted in a subset of five Even Start projects with about 200 families that were randomly assigned to be in Even Start or in a control group, and from an annual survey (the National Evaluation Information System, or NEIS) of all Even Start projects and participating families. Data on program costs were collected from Even Start grant awards and from a functional cost analysis conducted in 10 fully implemented projects participating in the In-Depth Study. Finally, descriptive data on Even Start projects, staff, and implementation, and on the characteristics and participation rates of families were collected through the NEIS annual survey of all projects.

Outcome data for the In-Depth Study were collected on program and control group children and adults prior to entering Even Start (when children were about four years of age), and twice again at nine months and at 18 months after entering Even Start. Families in the In-Depth Study were assessed at each measurement point, even if the program families were no longer participating in Even Start. This longitudinal design provides an unbiased, if conservative, estimate of program impacts by allowing comparisons of gains for randomly-assigned Even Start and control group families.

Outcome data for the NEIS survey of all Even Start projects were collected on program families at entry to Even Start and at the end of the program year. Thus, the NEIS outcome data are restricted to the subset of families who remained in the program between pretesting and posttesting. Any family that did not participate long enough to be posttested had to be omitted from the analysis. Since we expect length of participation to be related to positive program effects, we also expect families measured in the NEIS to show larger gains than program families measured in the In-Depth Study.

Findings from the NEIS can be used to generalize only to the population of families that remain in the program for several months (long enough to be posttested), while findings from the In-Depth study can be generalized to all Even Start families in the selected projects, including those that drop out early. Because no control group families were included in NEIS, data from this part of the study can only tell us how much was gained by Even Start families--not whether those gains are larger or smaller than what would have occurred in the absence of Even Start.

Finally, Even Start recruits and serves families that are willing to participate in the three core service areas. Because adults must be willing to take part in two types of interventions (parenting education and adult education), it is possible that the Even Start population is more motivated to succeed than the populations served by less demanding social programs such as Head Start.

Program Design

The Even Start legislation contains language setting forth the major elements that must be the basis of each Even Start project. However, grantees are allowed great flexibility in devising projects to meet local needs, and Even Start can be regarded as a family literacy laboratory in which many different approaches to delivering a common set of services are being tested.

Even Start projects are designed to use and build on existing educational and social services. Federal Even Start funds are used for coordinating existing services, as well as for the direct provision of services which are not locally available. Many Even Start projects use case managers, parent liaisons, or family advocates as key staff in the provision of coordinated services. Case managers conduct needs assessments and have ongoing contact with families at centers and through home visits. They are responsible for direct provision of some services as well as for ensuring that families take advantage of other services. Three core Even Start services are required by the legislation:

- **Early childhood education**: services to meet the early education needs of children from birth through seven years of age, designed to enhance development and prepare children for success in school.

- **Adult education**: services that develop the basic educational and literacy skills of the adult including adult basic education, adult secondary education, English as a second language, or preparation to attain a General Education Development (GED) certificate.

- **Parent education**: services for parents to enhance parent-child relationships and help parents understand and support their child's growth and development.

Projects are free to choose the specific instructional strategies used in each core service area, although ED regulations require that each family participate in all three areas. Even Start projects are required to provide some core services to parents and children in joint sessions and to provide some core instructional services in a home-based setting. They also can decide to focus educational activities for children on a narrower age span than the birth through seven range that is targeted by the legislation. Finally, core services may be provided either by staff funded through Even Start or by staff at cooperating agencies. For example, early childhood education may be provided by a local Head Start project and adult education classes might take place at local community colleges.

In addition to core services, Even Start projects provide "support" services which are designed to enable families to participate in core program activities. Examples of support services are transportation, child care, and referrals for employment. The Even Start legislation requires that support services be obtained from existing providers whenever possible, to ensure that Even Start projects avoid duplication of services.

Characteristics of Even Start Participants

Based on data reported for the 1989-90 through the 1992-93 program years, Even Start projects are serving the intended population. All participating Even Start households had at least one child between birth and age seven, 79 percent of the adults who participated in Even Start core services did not complete high school, and 66 percent of Even Start families had total annual income (earned income plus public assistance) under $10,000. The Even Start population can be further described as follows:

- 50 percent of Even Start families describe themselves as couples with children, 37 percent are single parent households, and 13 percent have extended families or other living arrangements.
- 46 percent of Even Start families report job wages as their primary source of financial support, while 49 percent report that government assistance is their primary source of support.
- Most adults in Even Start are ages 22-29 (46 percent) or 30-39 (31 percent).
- 40 percent of Even Start adults are white, 26 percent are African American, 22 percent are Hispanic, 4 percent are Native American, and 8 percent are Asian or Pacific Islander.
- English is the primary language for 66 percent of Even Start adults; Spanish is the primary language for 26 percent.
- Seven percent of the children served by Even Start were identified as having a disability.
- The average age of Even Start children dropped from 4.3 years in 1989-90 to 3.7 years in 1992-93, reflecting a federal emphasis on serving younger children.
- Even Start children scored low, at the 9th percentile nationally, on a vocabulary test given when they entered the program.
- Even Start adults attained high school level scores on a functional literacy reading test given when they entered the program.

LEP Adults. Even Start adults with limited English proficiency (LEP) can be characterized as follows: 86 percent were educated outside of the United States, 60 percent did not reach the ninth grade, 78 percent were not employed at the time they joined Even Start, 83 percent had an annual income of less than $15,000, and 18 percent were single parents.

Adults Who Enter with a Diploma or GED. Twenty-one percent of the adults who participated in Even Start entered already having attained a high school diploma or a GED.

While this is less than the 33 percent of adults that enter regular adult education programs with a diploma, questions have been raised about the fairness of serving these potentially less-needy adults in Even Start. Data show that adults who enter Even Start with a diploma or GED have characteristics that still suggest the need for Even Start services: 40 percent were single parents, 67 percent were not employed, 78 percent had annual income under $15,000, and 54 percent relied on government assistance for their primary source of income. In addition, the average CASAS reading score for these adults is 233, quite close to the average of 230 for adults who reached grades 9-12 prior to joining Even Start. This shows that, in spite of their credentials, adults who entered the program with a GED or diploma are not functioning at a higher level than their less-credentialed counterparts.

Implementation of Even Start Projects

Virtually all Even Start projects offer the three required core instructional services of adult education, parenting education, and early childhood education. They also offer some instructional services in a home-based setting, some services to parents and children together, and appropriate support services to enable families to participate fully in Even Start's core services.

Early Childhood Education. Children in Even Start projects were provided a range of early childhood education services:

- 67 percent of the projects enrolled some of their children in Head Start, 50 percent enrolled some of their children in a Chapter 1 pre-K program, and 87 percent provided some other preschool option.

- For children old enough to enter the public schools, most Even Start projects participated in joint planning activities with the public schools. Hence, 78 percent of the projects included kindergarten as an Even Start service, and 70 percent provided early childhood education services to children under age eight who were in primary grades, again through joint planning with the public schools.

Adult Education. Almost all (93 percent) of the projects reported that they provided services to prepare adults to attain a GED certificate, 85 percent provided services in adult education, 81 percent provided services in adult secondary education, and 61 percent provided instruction in English as a second language (ESL).

Parenting Education. Even Start projects provided a wide range of services to help parents understand and enrich their child's development. For example, projects helped families make use of services provided by other social service agencies, discussed parents' role in the education of their children, oriented parents and children to school routines, taught parents about child development, trained parents in child behavior management, worked to build parents' self-esteem, and instructed parents in life skills and in principles of health and nutrition. Each of these different types of parenting education was provided by 90 percent or more of the Even Start projects.

Adult/Child Services Delivered Through Even Start. More than 90 percent of the Even Start projects reported that they delivered core services to parents and children together. This is an important part of the Even Start model in that it impresses on parents that they are key to their child's education. Examples of services delivered to adults and children together include reading and story telling, developing readiness skills, social development and play, development of gross motor skills, working with numbers, arts/crafts, and health/nutrition.

Support Services. Support services remove barriers that could restrict a family's ability to participate in Even Start core educational services. Several types of support services were provided by 80 percent or more of the projects including transportation, family advocacy assistance, nutrition services, counseling services, and child care.

Cooperative Arrangements. Even Start projects are required to establish cooperative arrangements with other agencies to avoid duplicating services. This strategy allows optimal use of limited resources so that projects can concentrate on filling service gaps. Collaboration and cooperative arrangements were, indeed, a key focus of Even Start projects. During the 1992-93 program year, Even Start projects were involved in more than 6,000 cooperative arrangements to provide core services, an average of 20 cooperative arrangements per project. Forty-two percent of the arrangements were for parenting education, 27 percent were for adult basic education, and 31 percent were for early childhood education. The most common cooperators were "other departments and programs within the public schools," "local, county, state or tribal agencies," and "postsecondary institutions."

Implementation Problems. Even Start projects reported several barriers to implementation. The most common barriers were difficulties in the recruitment, retention, attendance, and motivation of families, problems of communication and coordination with cooperating agencies, lack of transportation for families, the unexpectedly severe social service needs of the families and community, lack of quality child care, financial problems, staffing problems, and problems with facilities and space.

Staffing Even Start Projects. Most Even Start projects have a project administrator and three to five staff who provide instruction in early childhood education and adult education. About half of the project administrators have multiple job responsibilities, including coordination or supervision in each of the three core services, recruiting families, and project evaluation.

- Approximately 54 percent of the staff providing services to Even Start families are paid by collaborating agencies, 32 percent are paid through the federal grant, and 13 percent are paid with local matching funds. Staff from collaborating agencies are most likely to provide direct instruction in early childhood education and adult education, although their classrooms may have a small number of Even Start participants.

- Even Start project administrators have an average of nine years of work experience in early childhood education programs, four years in adult education programs, and six years with parenting education.

- Early childhood education teachers have an average of eight years of work experience in that field, while adult education teachers have an average of five years of work experience in adult education programs.

One-third of Even Start staff have a college degree, 20 percent more have a master's degree, and an additional 9 percent have a doctorate. Those with a master's degree or beyond tend to be project directors, coordinators, or staff involved in the evaluation. More adult education teachers (36 percent) have a master's or doctorate than early childhood teachers (20 percent) or parenting education teachers (28 percent). Nearly one-quarter of early childhood or parenting education teachers do not have a college degree compared to only 9 percent of adult education teachers.

Even Start staff reported receiving an average of 40 hours of inservice training per year. Sessions most frequently focus on curriculum and instruction in the core service areas. Staff attended state, regional, and national conferences on family literacy, early childhood education, adult education, vocational education, and bilingual education.

Participation in Even Start

The great majority of Even Start families participate in early childhood education, parenting education, and adult education services. The proportion of families participating in all three core services is much higher in mature projects than in projects in their first or second year of operation.

Number of Participating Families. The number of families participating in Even Start has increased over time. This is due both to the addition of new projects and to improved efficiency among existing projects. During the 1989-90 school year, when Even Start began, 76 projects served about 2,500 families. By the 1992-93 school year, the program had grown to 340 projects which served about 20,000 families.

Length of Participation. Although Even Start projects generally are funded for four years, relatively few families take part for that amount of time. Of the families that began Even Start in 1989-90, 53 percent participated only in that first year, 24 percent participated in both the first and second program years, 13 percent participated in the first three program years, and 10 percent participated in all four years.

Reasons for Leaving. There are many reasons that families end their participation in Even Start; some are indicators of program success, while others signal problem areas. Seventy percent of the families that left the program indicated a reason for doing so. Based on families that reported a reason for leaving, completion of the planned educational program or meeting personal objectives was listed by 24 percent of families

that exited Even Start. Moving out of Even Start's catchment area was listed for 24 percent of families that exited. Thirteen percent of the families left because of a general lack of interest in the program and a subsequent refusal to participate. Another 12 percent reported that a family crisis prevented them from participating. Ten percent left because they became ineligible due to a change in the family situation, i.e., there was no longer an eligible child or adult in the family. Five percent gave a variety of reasons including medical problems, work conflicts, pregnancy, scheduling conflicts, child care problems, and a lack of transportation.

Participation in Core Services. The Department of Education requires that all Even Start families participate in the three core service areas during their time in the program.

- Almost all families had a child that participated in early childhood education during each year of the study: 90 percent in 1989-90, 97 percent in 1990-91, and 98 percent in 1991-92 and 1992-93.

- Participation rates for parenting education were a little lower: 88 percent in 1989-90, 94 percent in 1990-91, 93 percent in 1991-92, and 95 percent in 1992-93.

- At the beginning of Even Start, participation rates were low for adult education; 54 percent in 1989-90. This was due, in part, to misunderstandings about the definition of legitimate adult education services as well as problems convincing adults to participate on a regular basis. The Department of Education and local projects worked hard to increase these rates to 80 percent in 1990-91, 90 percent in 1991-92, and 91 percent in 1992-93.

- The percentage of families participating in all three core services increased steadily over the four years of the study, from 46 percent to 75 percent to 84 percent to 86 percent.

Amount of Core Services Received. The typical Even Start family received core services in seven different months during their period of enrollment in Even Start.

- The total amount of service received by the average family is 107 hours for adult education (median of 41 hours), 58 hours for parenting education (median of 29 hours), and 232 hours for early childhood education (median of 102 hours). There is great variation in these numbers across projects.

- On a monthly basis, the average Even Start family received 13.5 hours of adult education (median of 9 hours), 6.5 hours of parenting education (median of 4 hours), and 26 hours of early childhood education (median of 14 hours).

There is a clear relationship between amount of early childhood education and age of child. The average Even Start child less than one year of age received 15.5 hours per

month. One-year-olds received 14.3 hours per month, two-year-olds received 20.0 hours per month, three-year-olds received 29.2 hours per month, and four-year-olds received 35.5 hours per month (this is about 25 percent less than the average amount of early childhood education received by Head Start children).

Relationship Between Home-Based Services, Retention, and Amount of Service. There is a strong positive relationship between the amount of home-based service provided by a project and retention/participation in Even Start. Program retention, defined as the percentage of families participating in Even Start for six or more months, increases from about 40 percent in projects that provided no home-based services, to about 70 percent in projects that provided two-thirds or more of their services in the home. At the same time that retention is improved, hours of service are decreased in projects that emphasize home-based instruction. That is, the average hours of instruction per month received by participating families decreased as the amount of home-based instruction increased. It is easy to have high amounts of instruction in a center-based early childhood program where children participate as a group, while a home-based program which includes one-on-one instruction rarely will be able to provide more than one or two hours per week.

Effects of Even Start on Services Received

Our ability to attribute any observed changes in adults or children to Even Start as opposed to other factors is dependent on the extent to which Even Start has been able to increase families' participation in the three core service areas over what it would have been in the absence of Even Start. Data from this study show that Even Start has substantially increased participation rates in the three core service areas.

- We estimate that without Even Start, 30 to 40 percent of the Even Start population would take part in adult education. This is substantially less than the 91 percent participation rate achieved for Even Start families during the 1992-93 program year.

- For parenting education, participation increases from 8 percent without Even Start to 95 percent for families in Even Start.

- For early childhood education, participation rates are estimated to be about 60 percent in the absence of Even Start and 98 percent for families in Even Start.

These increases in service levels indicate that Even Start projects achieved the important step of ensuring that program services actually were received by participating families.

Effects of Even Start on Children

Children in Even Start acquired school readiness skills earlier than their counterparts in a control group. Further, children of adults with high amounts of exposure to parenting

education classes gained more on a vocabulary test than children of adults with less exposure to parenting education.

School Readiness. The PreSchool Inventory (PSI) measures school readiness skills (e.g., shapes, colors, sizes) and we expect children's scores on the PSI to improve with age, simply as a function of maturation. Based on data collected through the NEIS (and from many other studies that have used the PSI), we know that children's PSI scores increase by about .40 items per month due to normal maturation.

- By participating in Even Start, children's PSI scores increased at more than double the expected rate, by .91 items per month.
- Data from the In-Depth Study show that Even Start children gained more than control group children during their early participation in the program.
- However, follow-up measurements show that after 18 months control group children caught up with their Even Start counterparts, both because control group children enrolled in preschool or kindergarten, and because some Even Start children no longer participated in an Even Start early childhood program.
- Data from the NEIS show a positive relationship between amount of participation in early childhood education and gains on the PSI.

When they were three or four years of age, Even Start children were more likely than control group children to participate in early childhood education programs. Because of this, they showed an accelerated rate of learning on the PSI, suggesting that they learned basic concepts and precursors of kindergarten skills at an earlier age than they would have in the absence of the program. However, as control group children reached four and five years of age they, too, enrolled in preschool or reached public school age. At that point, they learned many of the same skills that Even Start children had learned at a younger age. What is not known is the long-term effect of the early boost in learning that was experienced by Even Start children. It is possible that since Even Start children learned readiness skills prior to entering the public schools, they may have progressed to other skills during kindergarten.

Receptive Vocabulary. The Peabody Picture Vocabulary Test (PPVT) measures hearing (receptive) vocabulary. Unlike the PSI, the PPVT has national norms. When given the PPVT as a pretest, Even Start children averaged 80 standard score points. This corresponds to the 9th percentile nationally and highlights the low verbal skills of children at entry to Even Start.

When compared with national norms, data from the NEIS indicate that Even Start children gained more than would be expected without the program; when posttested, they scored at the 19th percentile nationally. However, the In-Depth Study shows that Even Start children gained no more than their control group counterparts. As was the case for the

PSI, data from the NEIS demonstrate a positive relationship between amount of early childhood education service and gains on the PPVT.

Emergent Literacy Skills. The Children's Emergent Literacy Test (CELT) was developed by Abt Associates for this evaluation because no existing measure of children's emergent literacy skills was ideally suited to the Even Start evaluation. The CELT includes items assessing orientation and directionality of text, recognition or letters and punctuation, and the purposes of reading. It was administered only in the In-Depth Study, and while Even Start children gained a significant amount, there was no program impact because control group children also gained on this measure.

Correlates of Child Effects. Greater exposure to early childhood education is associated with greater gains for children on the PSI and PPVT. Just as important, and more relevant to the special focus of Even Start, there is a statistically significant positive relationship between the amount of time that parents spend in parenting education and their childrens' PPVT scores. In particular, PPVT scores are expected to increase by 1.1 points for each 100 hours that a child participates in early childhood education and by an additional 1.4 points for each 100 hours that a parent participates in parenting education. Although this finding is derived from a correlational (rather than experimental) analysis, it suggests that the Even Start model has added benefits for children beyond the expected benefits that are generally derived from a traditional early childhood education program.

Effects of Even Start on Parent Literacy

Even Start helped many adults acquire a GED. While adults who participate in Even Start achieved positive gains in functional literacy in reading, adults in a control group also achieved some gains.

GED Attainment. Many Even Start projects promote attainment of a high school diploma or a high school equivalency diploma such as the GED certificate, as do most adult education programs. The rationale for this goal is based upon a belief that a diploma or GED increases an adult's chances to find employment, provides opportunities for higher wages, and improves the quality of life through enhanced self-esteem. However, GED attainment is not an immediate or appropriate goal for all participants, nor is it emphasized by all projects.

Even Start has a strong, positive effect on GED attainment. Data from both the In-Depth Study and the NEIS lead to the same conclusion: Even Start has led to a substantial increase in the percentage of adults attaining a GED.

- Across all Even Start projects, 8.3 percent of all adults who entered Even Start without a GED or diploma achieved one while participating in adult education services.

- Data from the In-Depth Study show that 22.4 percent of Even Start adults attained a GED compared to 5.7 percent of adults in control group families.

Functional Literacy in Reading. Even Start projects may have been effective in improving the functional literacy of participating adults but the results from this evaluation are not conclusive.

- Data from the NEIS show that adults who participate in Even Start achieve positive gains on the CASAS reading survey, gains which are comparable or greater in size than those observed in other studies of adult education programs.

- However, data from the In-Depth Study show that the gains of Even Start adults are not significantly greater than the gains achieved by a randomly assigned control group, so we cannot conclude that Even Start has had a positive impact in this area.

- Even Start adults who spent large amounts of time in adult education had greater CASAS gains than adults who spent small amounts of time in adult education. This is the same relationship that was seen between participation in early childhood education and child-level gains on the PSI and PPVT.

Reading/Writing in the Home. No measurable effects were detected over an 18-month period on the extent to which parents read and write as part of their daily lives at home.

Effects of Even Start on Parenting Skills

Even Start did not measurably improve parenting skills in areas such as self-esteem, depression, or positive parent/child interactions. This could be due to a weakness in our ability to measure these areas, to generally positive parent responses and high self-ratings at pretest, or to a lack of program effectiveness.

Parents' Personal Skills. Parents' personal sense of well-being, as measured by a sense of mastery over their lives and a lack of depression, has been cited in the research literature as being related to the nature and quality of parent-child and family relationships. Data from the In-Depth Study did not reveal any effect of Even Start on these variables. The prevalence of mothers with depressive symptoms as measured by the CES-D scale was high among this group of families (46 percent of Even Start mothers were classified as having high levels of depressive symptoms at the time of the pretest), although this is no higher than what has been reported in other studies of low-income women with small children.

Home Learning Environment. Several scales describing different aspects of the home learning environment were included both in the In-Depth Study and in the NEIS (e.g., measures of learning activities in the home, teaching child at home, talking with child at home, family rules, activities outside home, and the Parent As A Teacher scale). While all variables showed small but significant positive changes on the NEIS, the In-Depth Study found a positive program effect only on one scale: the number of reading materials in the home. This scale measures the number of different types of reading materials

found in the home, e.g., books, magazines, newspapers. This finding is consistent with the observation that many Even Start projects make a concerted effort to increase the number of reading materials in participants' homes, either through loans or donations.

Parent-Child Reading Task. The In-Depth Study included a newly-developed measure of parent-child reading interactions. The parent was asked to read a simple book to her child while a trained observer used a pre-coded rating form to record five major aspects of parent-child interactions: parent describes book to child, parent questions or responds to child, child responds, parent's general affect, and child's general affect. There was no effect of Even Start on any of the five areas of observation.

Parental Expectations. In both the In-Depth Study and the NEIS, parents were asked questions about how well they expected their child to do in high school and the likelihood that their child will graduate from high school. As is the case for such questions in most studies, parents generally had high expectations for their children at the pretest. Even Start significantly increased parental expectations as assessed by the NEIS but not the In-Depth Study.

Effects of Even Start on Families

The In-Depth Study included several measures of the effects of Even Start on participating families including their perceived social support, adequacy of financial resources, income level and sources, and employment status. The NEIS instruments had questions about income and employment. There were no significant program effects on any of these measures. This is not surprising -- these areas are very difficult to change because they are affected by circumstances beyond the control of the program, such as the local economy and the availability of jobs. It is likely that longer interventions and other positive short-term impacts will be required in order to achieve significant gains on these measures.

While there are no effects for families on these quantifiable variables, Even Start participants described a number of qualitative changes in their lives and the lives of their children. Listening to the personal stories of program participants during focus groups conducted in ten projects, it became apparent that parents saw positive changes in their attitudes and skills. Parents described themselves as moving toward their goals of an educational certificate, getting a job and being a better parent. Given the entry status of Even Start parents, it is reasonable that we do not see short-term changes in the distal outcomes of increased employment and income.

Cost of Even Start

The federal cost per Even Start family declined over the life of the program, from $5,894 in 1989-90 to $3,669 in 1990-91, and again to $2,503 in 1991-92. This is due to increases in the number of families served each year, indicating that over time, projects have matured and become more efficient. Even Start projects also obtain substantial

resources (e.g., matching funds, in-kind contributions, and the value of referred services), in addition to their federal Even Start funds, in order to deliver appropriate services to participating families.

- In 1991-92, the average of $2,503 in federal funding per family was augmented by an average of $1,352 in other resources to arrive at total resources of $3,855 per Even Start family. Thus, federal Even Start funds comprise 65 percent of the total resources used per family and other funds comprise 35 percent.

- Almost two-thirds (64 percent) of all resources were spent on the direct provision of services: 31 percent for early childhood education, 15 percent for adult education, 9 percent for parenting education, and 9 percent for support services.

- Funds also were spent for program administration and coordination (14 percent), evaluation (10 percent), case management and recruiting (4 percent), and for other functions (8 percent).

Even Start costs vary tremendously across projects. As might be expected, projects that serve large numbers of families do so at a lower cost per family. In particular, projects that serve 100 or more families do so at a federal cost of $1,659 per family, while projects that serve 30 or fewer families spend an average of $6,312 in federal Even Start funds per family. Also, projects that delegate responsibility for providing core services to cooperating agencies have a lower cost ($1,878 per family) than projects that retain primary responsibility for providing core services (cost of $5,775 per family).

Implementation and Use of the Evaluation

Implementation of the Evaluation. The national Even Start evaluation was implemented as a collaborative effort between staff at the U.S. Department of Education, the staff of the evaluation contractors, and the staff of each Even Start project. It was hoped that a greater than usual level of involvement by Even Start grantees would benefit the evaluation through an increased investment and level of understanding on the part of program implementers, and through a better appreciation of programmatic issues and problems on the part of evaluation staff.

Responsibilities for the national evaluation were divided such that oversight came from the Department of Education; design, analysis, reporting, and technical assistance as well as data collection for the In-Depth Study were provided by the evaluation contractors; and input to the design and analysis, interpretation of findings, and primary responsibility for data collection for the NEIS were provided by local Even Start projects. To enable projects to undertake their evaluation responsibilities, they were given additional grant funds which were used to hire a local evaluator who helped interact with the national evaluation, assisted with data collection, and sometimes designed and conducted their own local evaluation activities to supplement the national evaluation.

Staff from each Even Start project were involved in an early design meeting where feedback was obtained on drafts of the data collection forms, and where a working group of Even Start project directors and local evaluators was established. Subsequent drafts of data collection forms were shared first with the working group, and then with all project directors and local evaluators. Training sessions in administering the data collection instruments were held for all Even Start projects; additional feedback on forms and on data collection problems was provided through formal meetings, mailings, and telephone-based technical assistance.

This approach was seen as experimental, and at the start of the evaluation it was unclear whether local project staff would be willing and able to undertake a high-quality data collection effort. After four years of experience, it is possible to draw the following conclusions about the implementation of the evaluation.

- Many Even Start projects were comfortable with their role as data collectors and were able to turn in high-quality data according to the time schedule set forth for the evaluation. Others needed substantial assistance in complying with the requirements of the evaluation, and several projects were not able to provide data according to the hoped-for timetable.

- Most Even Start projects availed themselves of the evaluation technical assistance provided by the evaluation contractor, and would have preferred more.

- Data collection was done by local staff with a wide range of backgrounds. In some cases, local evaluators did the data collection. In others, project staff (e.g., case managers, early childhood teachers) conducted the data collection.

- The arrangement to have data collected by local project staff has the drawbacks of potential bias, lack of attention to important details (e.g., matching family identification numbers over time), and work-load conflicts between evaluation and programmatic activities. The training and technical assistance provided by the national contractor worked to ameliorate these problems. On balance, we believe that the reliability of the data collection conducted under this model is somewhat lower than what would be attained by trained researchers, but that the response rates obtained by local staff are probably higher than the response rates that would be obtained by outside staff.

- There was great variability in the interest and ability of Even Start grantees to collect data using a microcomputer-based system. This system worked well for grantees with access to up-to-date equipment and staff who understood the basics of computer systems. Other grantees struggled and were frustrated with this approach, leading to delays in the submission of data. Still others

were not able to use a computer-based system, and submitted data on paper forms.

Use of the Evaluation. The evaluation was an integral part of Even Start's development. The Department of Education's requirement to collect a standard set of data on the characteristics of program participants, the operations of each project, and the effects of Even Start led to implementation of an information system that ensured that grantees had common definitions for key programmatic activities. For example, critical definitions such as "Who counts as a program participant?" and "What counts as a core service?" were clarified by the need to provide data for the evaluation.

Descriptive data from the evaluation identified achievements and confirmed that Even Start projects served the intended population and that projects were successful in establishing cooperative relationships with local organizations.

Data from the first year of the evaluation plus ongoing monitoring conducted by the Department of Education discovered a need to revise the program's eligibility requirements so that a family was not terminated from participation when a parent acquired a GED or a child reached age eight. The legislation was changed so that a family may participate in Even Start until all family members become ineligible.

Additionally, the evaluation discovered that a significant number of Even Start projects had difficulty persuading adults to participate fully in adult education programs. This led the Department of Education to issue non-regulatory guidance as well as provide technical assistance in implementing adult education services for the range of skill levels among Even Start families. Participation rates in the adult education component of Even Start did rise over time, likely as a result of the Department's efforts and increased maturity on the part of projects.

Finally, data from the NEIS were used by individual local projects in preparing local evaluations, and proved to be instrumental in helping some projects gain approval by the Department of Education's Program Effectiveness Panel.

Conclusions

We conclude this report by returning to a subset of the research questions that guided the evaluation and briefly summarizing the answers to each question.

What are Even Start's "best practices"? What types of projects or program elements work best under what conditions?

While evaluating "best practices" directly was beyond the scope of this project, some relevant conclusions can be drawn:

- Program retention is increased in projects that provide home-based services.

- More time spent receiving services is associated with greater gains on literacy tests for adults and children.

Providing home-based services is a good way to increase retention. There is a strong, positive relationship between the amount of home-based services and the length of program participation. In all three core services, the proportion of families who stay in the program more than six months goes up from 40 percent in projects with minimal home-based services to 70 percent in projects where a majority of services are provided in the home.

A greater amount of exposure to Even Start's core services (i.e. larger amounts of time spent receiving core services) appears to have a positive impact on literacy outcomes for children and adults. In other words, more time spent in early childhood education is associated with greater school readiness and vocabulary gains for children, and more time spent in adult education is associated with greater functional literacy gains for adults. The findings about home-based services and amount of service exposure work against each other, since it is difficult to deliver large amounts of instructional service in a home-based setting.

Evaluating "best practices" directly was beyond the scope of this evaluation. Anecdotal reports from the In-Depth Study site visits identified many innovative instructional strategies that were used with parents and children which could benefit from additional research. Examples include:

- Using computers in adult education classrooms to write newsletters sharing personal experiences and program activities and to institute a pen pal program with other Even Start projects.

- Incorporating newspapers into parenting and adult education classes through daily discussions of current events, distribution of free Spanish-language papers, and written homework about newspaper articles.

- Integrating adult and early child education by having parents write stories for their children and make books to read at home.

- Enhancing early childhood classrooms with signs and symbols to foster emergent literacy skills.

- Hiring social workers to provide parenting education and staff training.

- Using a team approach to staffing to facilitate integration of adult and child curricula and instruction in the classroom and during home visits.

How does the program compare to alternative programs addressing the same problem? Is it more effective? How do the costs compare?

This question was not addressed in the current evaluation. However, how Even Start compares to alternative programs in cost and effectiveness is a question that has been asked by researchers and policymakers over the course of the evaluation, and merits further study.

What is the program's impact on its target population and service delivery structure?

Even Start is not large enough to make an impact on its entire target population. However, it has had a broad impact on individual families and many local service communities.

Some limited, anecdotal information about Even Start's impact on the local service delivery structure was collected as part of the In-Depth Study. In that component of the evaluation, project directors described how some school districts had incorporated aspects of Even Start, such as home visits or parent involvement, into the district's philosophy and approach. In order to gather more systematic data about community impacts, a separate study focusing on that topic would be necessary.

Even Start is too small a program to make a major impact on its entire target population. In spite of this caveat it is important to take note of several areas which indicate that Even Start has had a broad impact. First, Even Start funding has grown substantially each year since 1989. In a time of fiscal austerity, this is a clear and visible signal that Even Start proponents have been able to make a convincing case for the benefits of their program. Second, Even Start projects now exist in every state in the nation -- a further indication of Even Start's widespread support. Third, anecdotal evidence shows that local Even Start projects have generated a wealth of valuable and practical ideas about implementing family literacy programs -- ideas which have helped other program developers.

How well does the basic Even Start model work?

Even Start has been well-implemented over a period of years, leading to short-term improvements in the lives of many adults and their children. Based on the findings from this evaluation, we can draw several conclusions about the viability of the basic Even Start model:

- The model takes multiple years to fully implement. While implementation is not easy, almost all projects are able to offer all three core services and multiple support services, to offer some home-based services, and some services to parents and children together, and to make appropriate collaborative arrangements with local service providers.

- As they matured in their third and fourth years, Even Start projects were able to use the same amount of resources to recruit and serve about twice as many families as they served in their first year.

- The total amount (i.e., number of hours of participation) of core instructional services received by participating families is important. A larger amount of participation in core services is associated with larger test gains for adults and children.

- Participation in adult education services led many Even Start adults to attain a GED certificate.

- Participation in early childhood education led Even Start children to attain school readiness skills sooner than they otherwise would have.

- Greater parents' participation in parenting education is related to increases in their children's vocabularies.

- Even Start did not produce any measurable effects on parenting skills, family resources, income, or employment.

- Program retention is increased in projects that provide larger amounts of home-based services.

The current evaluation has identified areas where Even Start has had short-term effects on children and parents. However, in order to evaluate long-term effects on program participants, a longitudinal study is required. For example, the long-term effect of Even Start on children's school behaviors and cognitive performance is a critical element in assessing Even Start's impact. To investigate this, a study is needed that follows Even Start children into the public schools and collects information from teachers, parents, and students.

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